WHAT IS CLAIMED IS:

1. A method for evaluating whether a material will allow bacteria to pass through the material or around the material or into the material comprising:

a) providing bacteria which are modified to produce a first detectable signal;

b) placing the bacteria on a first side of the material being evaluated; and

c) determining whether the first signal is present on a second side of the material or within the material;

where absence of the first signal on the second side of the material or within the material indicates that the bacteria have not passed through or around the material and where presence of the first signal on the second side of the material or within the material indicates that the bacteria have passed through or around the material.

2. The method of claim 1, additionally comprising quantifying the amount of bacteria that will pass through the material or into the material by quantifying the amount of the first signal on the second side of the material;

where increasing amounts of the first signal on the second side of the material or within the material indicates increasing amounts of bacteria that will pass through the material or into the material.

3. The method of claim 1, where the bacteria are modified to produce a second detectable signal, and where the method additionally comprises determining whether the second signal is present on the second side of the material or within the material;

where absence of the second signal on the second side of the material or within the material indicates that the bacteria have not passed through or around the material and where presence of the second signal on the second side of the material or within the material indicates that the bacteria have passed through or around the material.

4. The method of claim 1, where the first signal is light emission in the visible spectrum.

5. The method of claim 3, where the second signal is light emission in the visible spectrum.

6. The method of claim 1, where the bacteria are modified to incorporate a functional

green fluorescent protein.

7. The method of claim 1, where the bacteria are modified to incorporate a functional luciferase.

8. The method of claim 1, where the bacteria are modified to incorporate both a functional green fluorescent protein and a functional luciferase.

9. The method of claim 1, where placing the bacteria on a first side of the material being evaluated comprises placing the bacteria in the center of a hollowed out, extracted natural tooth where the root end of the tooth is sealed with the material, and then placing the root end of the tooth in a test medium; and

where determining whether the first signal is present on a second side of the material or within the material comprises detecting the first signal in the test medium or within the material.

10. The method of claim 3, where placing the bacteria on a first side of the material being evaluated comprises placing the bacteria in the center of a hollowed out, extracted natural tooth where the root end of the tooth is sealed with the material, and then placing the root end of the tooth in a test medium; and

where determining whether the first signal is present on a second side of the material or within the material comprises detecting the first signal in the test medium or within the material.

11. The method of claim 1, where the bacteria provided are additionally modified to be grown selectively.

12. The method of claim 11, where the bacteria grow selectively due to antibiotic resistance.

13. A method for the evaluation of a material to determine whether the material is susceptible to bacterial contamination or colonization when implanted into an animal or human comprising:

a) providing bacteria which are modified to produce a first detectable signal;

b) exposing the material being evaluated to the bacteria; and

c) determining whether the first signal is present on the material or within the material;

where absence of the first signal on the material or within the material indicates that the material is not susceptible to bacterial contamination or colonization and where presence of the first signal on the material or within the material indicates that the material is susceptible to bacterial contamination or colonization.

14 The method of claim 13, additionally comprising quantifying the susceptibility of the material to bacterial contamination or colonization by quantifying the amount of the first signal on the material or within the material;

where increasing amounts of the first signal on the material or within the material indicates increasing susceptibility of the material to bacterial contamination or colonization.

15. The method of claim 14, where exposing the material being evaluated to the bacteria comprises using the material as wound closure material in an animal or human.

16. The method of claim 15, where exposing the material being evaluated to the bacteria additionally comprises administering the modified bacteria intravenously to the animal or human.

17. The method of claim 13, where the bacteria are modified to produce a second detectable signal, and where the method additionally comprises determining whether the second signal is present on the material or within the material;

where absence of the second signal on the material or within the material indicates that the material is not susceptible to bacterial contamination or colonization and where presence of the second signal on the material or within the material indicates that the material is susceptible to bacterial contamination or colonization.

18. The method of claim 13, where the first signal is light emission in the visible spectrum.

19. The method of claim 17, where the second signal is light emission in the visible spectrum.

20. The method of claim 13, where the bacteria are modified to incorporate a functional green fluorescent protein.

21. The method of claim 13, where the bacteria are modified to incorporate a functional luciferase.

22. The method of claim 13, where the bacteria are modified to incorporate both a functional green fluorescent protein and a functional luciferase.